Reg # 2393 - 377 PM-14

JUL - 8 1993

S440121

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360/18

Mr. J. Allen Dunlap III
HACO, Inc.
P. O. Box 667
Greeley, CO 80632

Dear Mr. Dunlap:

Subject: Cygon 2-E Systemic Insecticide
EPA Registration No. 2393-377
Your Application for Pesticide Amendment Dated
April 23, 1993

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable provided that you:

1. In accordance with PR Notice 93-3, the statement "Do not apply directly to water or wetlands" located under the ENVIRONMENT HAZARDS section should be changed to read:

"For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark."

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A stamped copy of the labeling is enclosed for your records.

Note that this acceptance of your label does not relieve you of your obligation to comply with the Worker Protection Standard (WPS). If any of your products are covered by the WPS, you are required to submit, **and receive the Agency's approval** by April 21, 1994, of a revised label reflecting the required label statements of 40 CFR 156, published in the FEDERAL REGISTER of August 21, 1992 (57 FR 38102). Under the WPS labeling regulations at 40 CFR 156, subpart K, § 156.200(c)(3), you are prohibited from distributing or selling any product within the scope of the WPS requirements after April 21, 1994, without amended labeling accepted by the Agency.

Sincerely yours,

Robert A. Forrest
Product Manager (14)
Insecticide-Rodenticide Branch
Registration Division (H7504C)

MADDEN DISK #3 7/8/93

Hopkins®

ACCEPTED
with COMMENTS
In EPA Letter Dated:
JUL 8 1993
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 2393-377

CYGON® 2-E

Systemic Insecticide

CONTROLS HOUSEFLIES
For control of Insects and Mites on Ornamental Plants
(1 gallon contains 2 pounds of dimethoate)

ACTIVE INGREDIENTS:	
Dimethoate (0,0-Dimethyl S-[(methylcarbamoyl)methyl] phosphorodithioate)	23.4%
INERT INGREDIENTS:*	76.6%
TOTAL	100.0%

*This product contains Xylene-Range Aromatics

KEEP OUT OF REACH OF CHILDREN
WARNING

See Below for Statement of Practical Treatment and Additional Precautionary Statements

NET CONTENTS 5 GALLONS

EPA REG. NO. 2393-377 EPA EST. NO. 34704-MS-1

®TM—American Cyanamid Co
35370 EXP04/93

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
WARNING

VAPOR HARMFUL — Harmful or Fatal If Swallowed
Concentrated Material Causes Eye Irritation

Avoid breathing vapor or spray mist. Avoid contact with skin or eyes. Use only with adequate ventilation. Wash thoroughly after handling. Do not contaminate food. Do not use in homes. Rinse spills on outside of container after use. Do not contaminate feed and foodstuffs, drinking fountains, litter and feed troughs. Do not use in milk-processing rooms, including milk houses and milk storage rooms.

AERIAL APPLICATION: AUTOMATIC FLAGGING DEVICES SHOULD BE USED WHENEVER FEASIBLE. IF HUMAN FLAGGERS ARE EMPLOYED, THEY MUST WEAR THE PROTECTIVE CLOTHING AND RESPIRATOR SPECIFIED ON THIS LABEL.

Required Clothing and Equipment for Application:
All applicators, including homeowners, flaggers and all personnel involved with the mixing, loading, and transferring operations must wear the protective clothing and equipment enumerated below. Pilots are exempt from this requirement. The protective clothing and equipment to be worn is as follows:

a. Impermeable gloves (for example, rubber or plastic covered reinforced gloves).
b. Boots or boot covers.
c. Long-sleeved shirt and long pants.
d. Wide-brimmed hat.
e. Respirators must be worn by flaggers and mixer/loaders.

ENVIRONMENTAL HAZARDS
This pesticide is toxic to wildlife and aquatic invertebrates. Do not apply directly to water or wetlands, runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning equipment or disposal of wastes.

This pesticide is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

CHEMICAL HAZARDS
COMBUSTIBLE. DO NOT USE, POUR, SPILL OR STORE NEAR HEAT OR OPEN FLAME.

STATEMENT OF PRACTICAL TREATMENT
If Swallowed: Call a physician or Poison Control Center immediately. Gastric lavage is usually indicated. Do not induce vomiting. Vomiting may cause aspiration pneumonia. Do not induce vomiting or give substances by mouth to an unconscious person.
If Inhaled: Remove victim to fresh air. Assist respiration if indicated.
If on Skin: Promptly wash contaminated skin with soap and water.
If in Eyes: Immediately flush eyes with plenty of water. Get medical attention if irritation persists.
NOTE TO PHYSICIANS: This product may cause cholinesterase inhibition. Atropine is antidotal.

DIRECTIONS FOR USE
It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

STORAGE AND DISPOSAL
Do not contaminate water, food, or feed by storage or disposal.
Storage: Do not store near heat or open flame. Do not store below 40°F. Mix as needed, do not store diluted material.
Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
Container Disposal: Metal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.
Plastic: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

DIRECTIONS
OUTDOOR ORNAMENTAL PLANTS
CYGON 2-E is generally effective in controlling aphids, thrips, leaf miners, scales, leafhoppers and mites. For proper timing of treatments for the control of specific pests on ornamental plants, consult your State Agricultural Experiment Station or State Agricultural Extension Service. Make adequate sprays when pests appear or when damage is first observed. Do not overdose or overspray. Do not use on ornamental plants not listed. Do not use on any ornamental stock plants grown as a source of propagation material, such as cuttings, layers, root stocks or scions for grafting or budding. Do not use in spray mixtures containing oil. Do not use on plants growing in greenhouses.

THE USES LISTED BELOW ARE FOLIAR SPRAYS UNLESS OTHERWISE INDICATED

Ornamental Plants—Outdoor Plants Only	Pest Controlled	PINTS Per 50 Gals. Water or Teaspoons per 1/2 Gal. Water	Tablespoons per 5 Gals. Water
Azaleas	Lace Bugs, Leaf Miners, Mites, Tea Scale, Whiteflies	1	2
Camellias	Aphids, Camellia Scale, Mites, Tea Scale	1	2

Foliar Spray: Apply 2 sprays 6 weeks apart the first year followed by annual applications soon after first growth begins in the spring. Soil Drench: Apply CYGON 2-E as a soil drench around the base of plants in early spring at the rate of 4 tablespoons per 1 gallon of water per plant up to 6 feet tall. Increases this rate proportionately for larger plants.

[illegible]

Hopkins®

CYGON® 2-E

Systemic Insecticide

CONTROLS HOUSEFLIES
For control of Insects and Mites on Ornamental Plants

(1 gallon contains 2 pounds of dimethoate)

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*TM—American Cyanamid Co

35370 EXP04/93

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING

VAPOR HARMFUL — Harmful or Fatal If Swallowed
Concentrated Material Causes Eye Irritation

Avoid breathing vapor or spray mist. Avoid contact with skin, eyes or clothing. Use only with adequate ventilation. Wash thoroughly after handling. Do not contaminate food. Do not use in homes. Rinse container after use. Do not contaminate feed, water, or foodstuffs. Do not use in dairy barns including milk houses and milk storage rooms.

AERIAL APPLICATION: AUTOMATIC [illegible] BE USED WHENEVER FEASIBLE [illegible] PLOYED, THEY MUST WEAR [illegible] AND RESPIRATOR SPECIFIED ON [illegible]

Required Clothing and Equipment

All applicators, including [illegible] personnel involved with the mixing [illegible] ons must wear the protective clothing listed below. Pilots are exempt from this requirement. [illegible] ng and equipment to be worn is as follows:

a. Impermeable gloves (neoprene or plastic covered reinforced gloves).
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This pesticide is toxic to wildlife and aquatic invertebrates. Do not apply directly to water or wetlands, runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning equipment or disposal of wastes.

This pesticide is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

CHEMICAL HAZARDS

COMBUSTIBLE. DO NOT USE, POUR, SPILL OR STORE NEAR HEAT OR OPEN FLAME.

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NOTE TO PHYSICIANS: This product may cause cholinesterase inhibition. Atropine is antidotal.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

STOR[illegible] AND DISPOSAL

Do not contamin[illegible] feed by storage or disposal.

Storage: Do [illegible] open flame. Do not store below 40°F. Mix[illegible] material

Pesticid[illegible] are acutely hazardous. Improp[illegible], spray mixture, or rinsate is a vio[illegible] astes cannot be disposed of by use [illegible] ontact your State Pesticide or Environ[illegible], Hazardous Waste representative at the [illegible]e for guidance.

[illegible]tal: Triple rinse (or equivalent). Then offer for [illegible]ning, or puncture and dispose of in a sanitary [illegible]procedures approved by state and local authorities. [illegible]se (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or by state and local authorities, by burning. If burned, stay [illegible]oke

DIRECTIONS
OUTDOOR ORNAMENTAL PLANTS

CYGON 2-E is generally effective in controlling aphids, thrips, leaf miners, scales, leafhoppers and mites. For proper timing of treatments for the control of specific pests on ornamental plants, consult your State Agricultural Experiment Station or State Agricultural Extension Service. Make adequate sprays when pests appear or when damage is first observed. Do not overdose or overspray. Do not use on ornamental plants not listed. Do not use on any ornamental stock plants grown as a source of propagation material, such as cuttings, layers, root stocks or scions for grafting or budding. Do not use in spray mixtures containing oil. Do not use on plants growing in greenhouses.

THE USES LISTED BELOW ARE FOLIAR SPRAYS UNLESS OTHERWISE INDICATED

Ornamental Plants—Outdoor Plants Only	Pest Controlled	PINTS Per 50 Gals. Water or Teaspoons per ½ Gal. Water	Tablespoons per 3 Gals. Water
Azaleas	Lace Bugs, Leaf Miners, Mites, Tea Scale, Whiteflies	1	2
Camellias	Aphids, Camellia Scale, Mites, Tea Scale	1	2

Foliar Spray: Apply 2 sprays 3 weeks apart the first year followed by annual applications soon after first growth begins in the spring. Soil Drench: Apply CYGON 2-E as a soil drench around the base of plants in early spring at the rate of 4 tablespoons per gallon of water per plant up to 6 feet tall. Increase this rate proportionately for larger plants.

CYGON* 2-E

EPA REG. NO. 2393-377

Ornamental Plants—Outdoor Plants Only	Pest Control	PINTS Per 50 Gals. Water or Teaspoons per ½ Gal. Water	Tablespoons per per 3 Gals. Water
Roses	Aphids, Leafhoppers Mites, Thrips	1	2
Birch	Aphids, Leaf Miners	½	2
		For leaf miners apply when leaves are expanded (about mid-May) and repeat in early July.	
Boxwood	Leaf Miners, Mealy Bugs, Mites	1	2
		For leaf miners, apply in spring when leaf miner flies first appear or in early summer for control of larvae in the infested leaves.	
Euonymus	Aphids, Scale	2	4
Gladiolus	Aphids, Thrips	1	2
Hemlock	Mites, Scale	1	2
Juniper	Aphids, Bagworms, Midges, Mites	2	4
Pine	Aphids, Bagworms, European Pine Shoot Moth, Nantucket Pine Tip Moth, Zimmerman Pine Moth	2	4

CHEMIGATION:
Refer to supplemental labeling entitled "APPLICATION THROUGH IRRIGATION SYSTEMS—CHEMIGATION" for use directions for chemigation. Do not apply this product through any irrigation systems unless the supplemental labeling on chemigation is followed.

HOUSEFLIES

For localized housefly control, apply as a spray containing ½ pint of CYGON 2-E in 5 quarts of water with a knapsack or similar type sprayer to areas frequented by flies, such as doorways, around windows, etc. Repeat applications should be made when necessary. Good sanitation is a necessary part of any effective fly control program.

Maggot Sprays: For the control of housefly maggots, mix ½ pint of CYGON 2-E in 5 quarts of water and apply as a coarse spray or with a sprinkling can to fly-breeding areas, such as poultry droppings in caged-layer houses, garbage dumps and manure piles.

Repeat application as additional manure or garbage is added.

Residual Wall Sprays: For the control of houseflies including resistant strains, in dairy barns, hog pens, calf barns, poultry houses and other farm buildings, apply a 1% residual spray to the ceilings, walls, stanchions, etc. Prepare the spray by mixing ½ pint of CYGON 2-E in 1½ gallons of water. Thoroughly wet all fly resting areas to the point of runoff. One gallon of spray will cover 500 to 1,000 square feet of surface. Repeat applications should be made when necessary. Remove all animals from buildings when applying residual wall sprays.

CYGON 2-E IS ACCEPTABLE FOR USE AS A RESIDUAL-TYPE INSECTICIDE IN AND AROUND FEDERALLY INSPECTED MEAT PACKING PLANTS EXCEPT WHERE MEAT FOOD PRODUCTS ARE PROCESSED OR HANDLED.

CYGON 2-E controls flies up to 8 weeks or longer.

General Outside Use: For the control of houseflies around homes and recreation areas, garbage cans, animal quarters, food-processing plants, warehouses, loading docks and refuse areas: thoroughly spray exposed surfaces such as walls, fences, garbage and refuse containers with ½ pint of CYGON 2-E in 1½ gallons of water.

Repeat applications should be made when necessary.

DISCLAIMER

HACO, Inc. warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use herein described when used in accordance with the directions for use.

Any damages arising from a breach of this warranty shall be limited to direct damages, and shall not include consequential commercial damages such as loss of profits or values, etc.

HACO, Inc. makes no other express or implied warranty, including any other express or implied warranty of FITNESS or of MERCHANTABILITY.

Buyer assumes the risk of any use contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable by HACO, Inc.

MANUFACTURED FOR
HACO, inc.
BOX 7190
MADISON, WISCONSIN 53707 U.S.A.

595

SUPPLEMENTAL LABELING

APPLICATION THROUGH IRRIGATION SYSTEMS—CHEMIGATION

Hopkins®

CYGON® 2-E
SYSTEMIC INSECTICIDE

EPA REG. NO. 2393-377

FOR OUTDOOR ORNAMENTAL PLANTS AS DIRECTED ON LABEL.

Apply this product only through sprinkler, including center pivot lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; flood (basin); furrow; border; or drip (trickle) irrigation system(s). Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Mix in clean supply tank the recommended amount of this product for acreage to be covered, and needed quantity of water.

This product should not be tank-mixed with other pesticides, surfactants or fertilizers unless prior use has shown the combination noninjurous under your conditions of use.

Follow precautionary statements and directions for all tank-mix products

On all crops, use sufficient gallonage of water to obtain thorough and uniform coverage, but not cause runoff or excessive leaching. This will vary depending on equipment, pest problem and stage of crop growth. Application of more or less than optimal quantity of water may result in decreased chemical performance, crop injury or illegal pesticide residues.

Meter this product into the irrigation water uniformly during the period of operation. Do not overlap application. Follow recommended label rates, application timing, and other directions and precautions for crop being treated.

Continuous mild agitation of pesticide mixture may be needed to assure a uniform application, particularly if the supply tank requires a number of hours to empty.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Note: HACO, Inc. does not encourage connecting chemigation systems to public water supplies. The following information is provided for users who have diligently considered all other application and water supply options before electing to make such a connection.

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalant in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speeds favor drift beyond the area intended for treatment

SPRINKLER CHEMIGATION (FOLIAR SPRAY USES)

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must also contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and compatible of being fitted with a system interlock.

Do not apply when wind speeds favors drift beyond the area intended for treatment.

FLOOD (BASIN), FURROW AND BORDER CHEMIGATION (SOIL DRENCH USES)

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.

System utilizing a pressurized water and pesticide injection system must meet the following requirements:

a. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
c. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
f. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and compatible of being fitted with a system interlock.

DRIP (TRICKLE) CHEMIGATION (SOIL DRENCH USES)

The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

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The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must also include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

ALL APPLICABLE RESTRICTIONS, PRECAUTIONS, AND DIRECTIONS ON THE EPA REGISTERED PRODUCT LABEL MUST BE FOLLOWED.

MANUFACTURED FOR
HACO, Inc.
BOX 7190
MADISON WISCONSIN 53707 U.S.A.